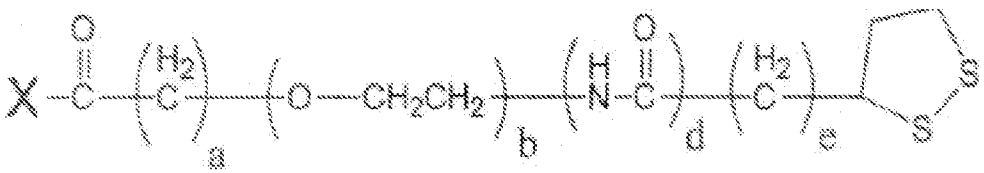
AMENDMENTS TO THE CLAIMS

1. (currently amended): A linker compound for use in arrangement of sugar molecules on a supporter,

the linker compound having a structure represented by following general formula (1), where a, b, d, e are independently an integer of 0 to 6,

X has a structure serving as a multi-branched structure moiety including three or more hydrocarbon derivative chains, wherein the hydrocarbon derivative chains each include an aromatic amino group at an end thereof, and may or may not include a carbon-nitrogen bond in a main chain thereof, and

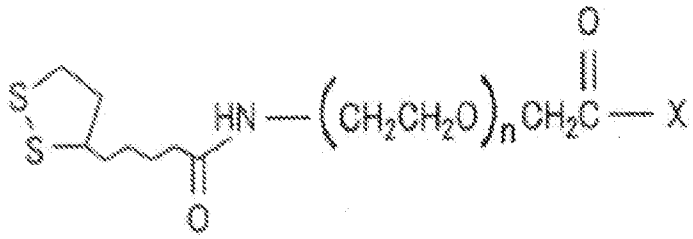
X has oligoethylene oxide therein when ~~b is 0~~ b is 0.



....(1)

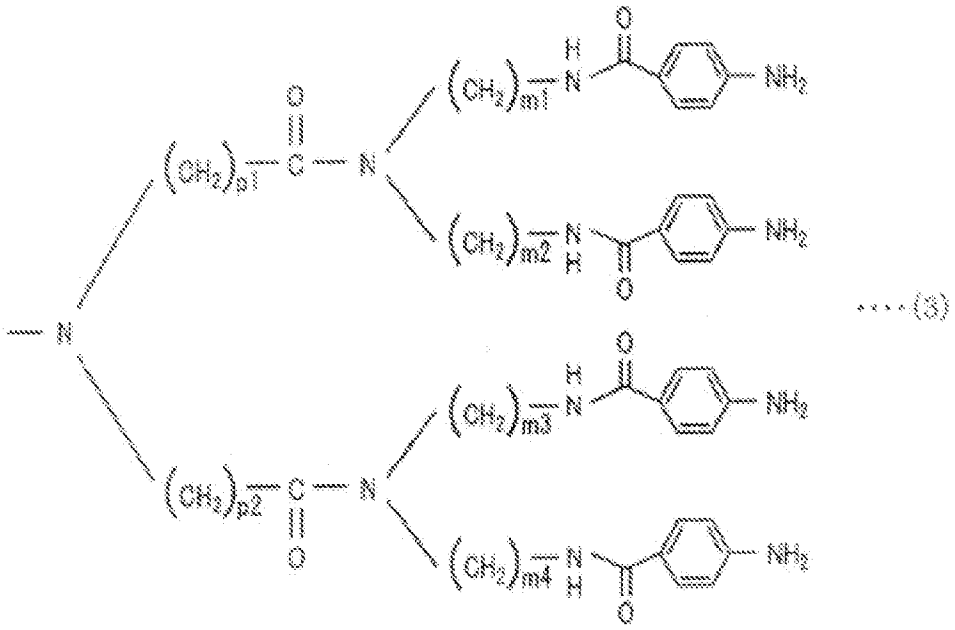
2. (original): The linker compound according to claim 1 of a structure represented by following general formula (2), where n is an integer of 1 to 6, and

X has a structure serving as a multi-branched structure moiety including three or more hydrocarbon derivative chains, wherein the hydrocarbon derivative chains each include an aromatic amino group at an end thereof, and may or may not include a carbon-nitrogen bond in a main chain thereof.



....(2)

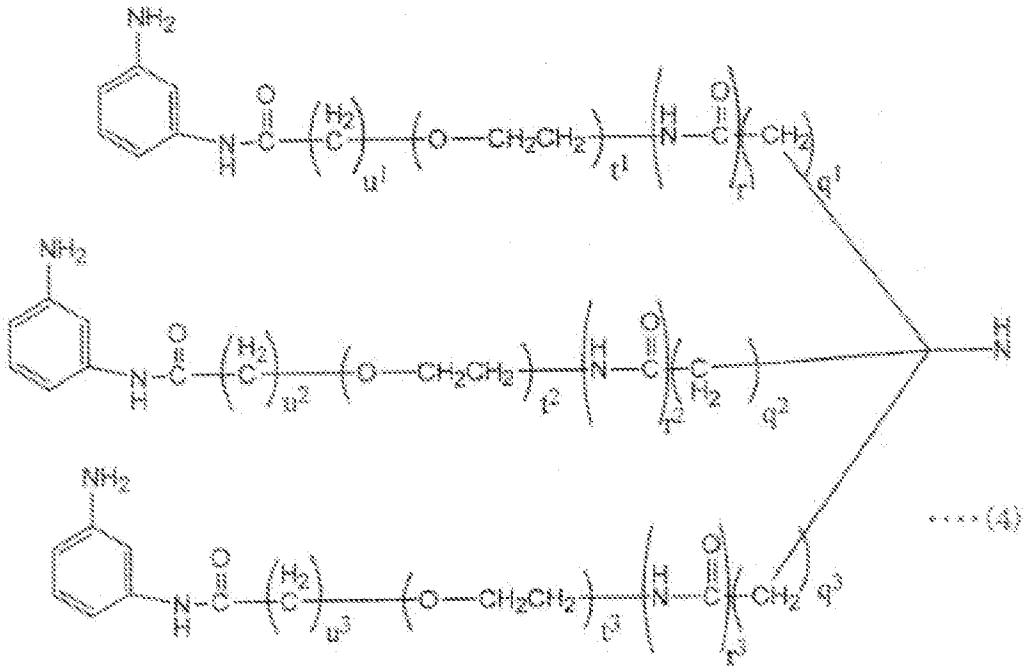
3. (currently amended): The linker compound according to claim 1 ~~or 2~~, where X has a structure represented by following general formula (3), ~~wherein ml, m2, m3, m4, p', and p2 are independently an integer of 1 to 6.~~



.... (3)

wherein ml, m2, m3, m4, p1 and p2 are independently an integer of 1 to 6.

4. (currently amended): The linker compound according to claim 1 ~~or 2~~, where X has a structure represented by following general formula (4), ~~wherein q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6.~~

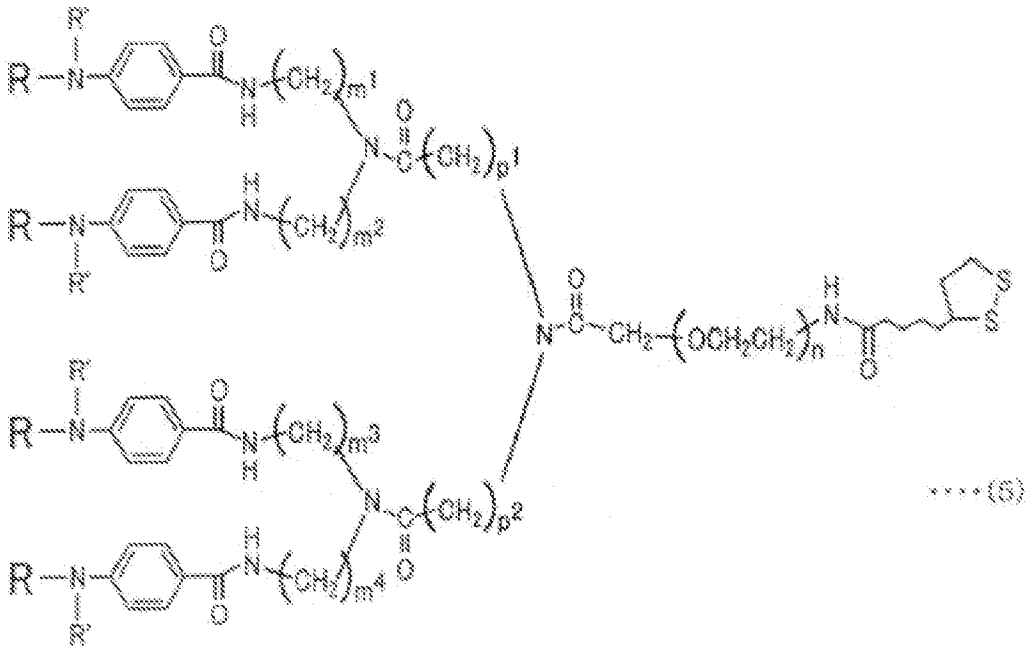


wherein q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6.

5. (currently amended): A ligand conjugate including the linker compound according to ~~any one of claims 1 through 4~~ claim 1, wherein an aromatic amino group of the linker compound includes a sugar molecule introduced therein.

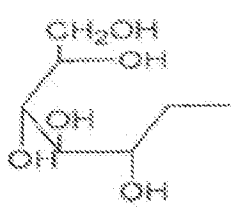
6. (currently amended): ~~A ligand conjugate for use in arrangement of sugar molecules on a supporter,~~

~~the linker complex~~ The ligand conjugate of claim 5, having a structure represented by following general formula (5), where m^1, m^2, m^3, m^4, n, p^1, and p^2 are independently an integer of 1 to 6, R′ is hydrogen (H) or R, and

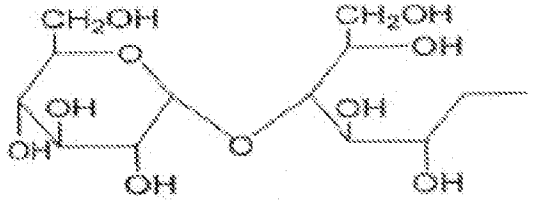


....(5)

R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).

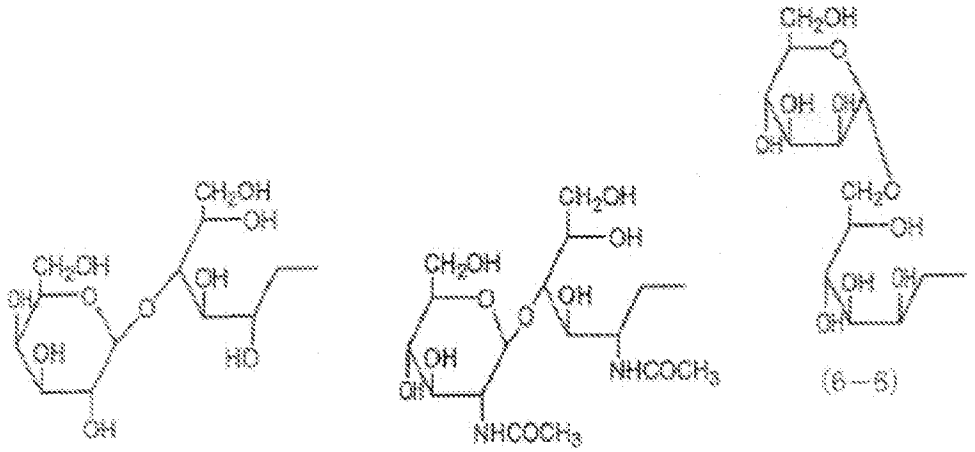


(6—1)



(6—2)

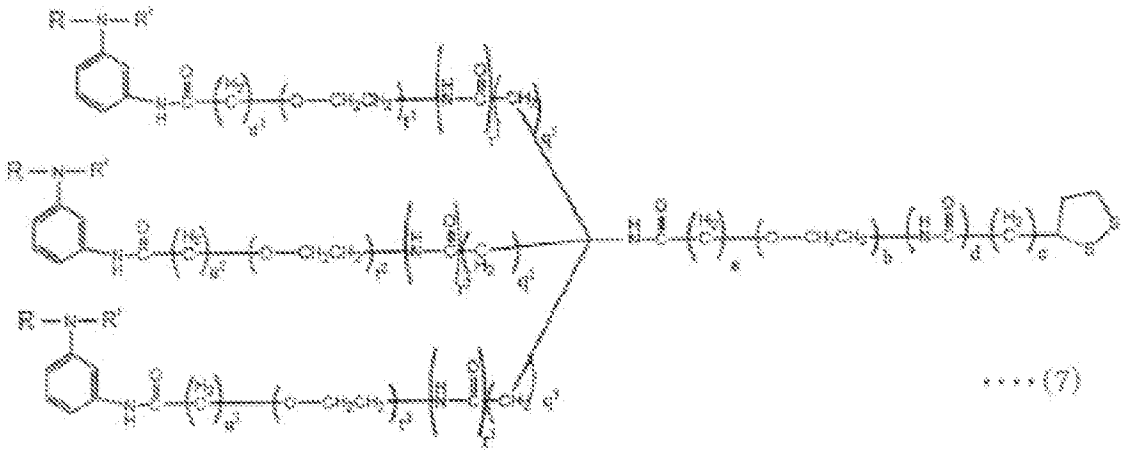
(6—3)



(6-4) (6-5) (6-6)

7. (currently amended): ~~A ligand conjugate for use in arrangement of sugar molecules on a supporter,~~

~~the linker complex~~ The ligand conjugate of claim 5, having a structure represented by following general formula (7), ~~where a, b, d, e, q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6, t^1, t^2, and t^3 are not 0 when b is 0, b is not 0 when t^1, t^2, and t^3 are 0, R′ is hydrogen (H) or R, and~~



....(7)

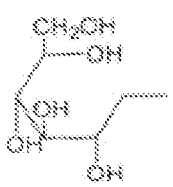
where a, b, d, e, q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6,

t^1, t^2, and t^3 are not 0 when b is 0,

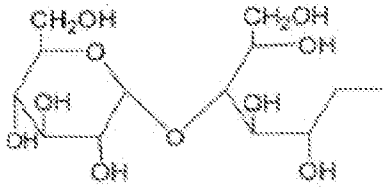
b is not 0 when t^1, t^2, and t^3 are 0,

R′ is hydrogen (H) or R, and

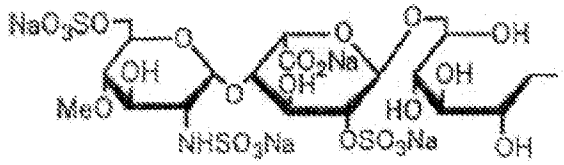
R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).



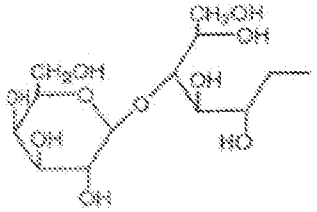
(6—1)



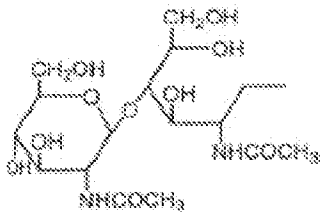
(6—2)



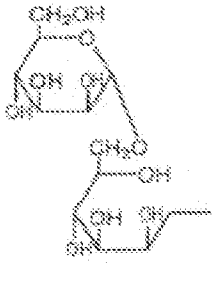
(6—3)



(6—4)



(6—5)



(6—6)

8. (currently amended): A ~~producing method of~~ method to prepare a linker compound according to ~~any one of claims 1 through 4~~ claim 1, comprising the steps of:

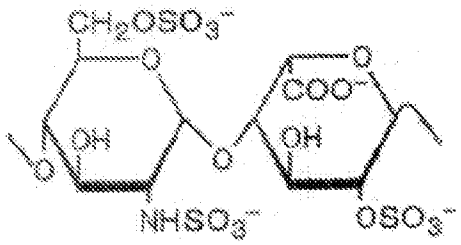
carrying out a condensation reaction between thioctic acid and an amine compound including three or more branched chains each having an aromatic amino group end protected by a protecting group; and

deprotecting the protecting group at the aromatic amino group end.

9. (currently amended): A ~~producing method of~~ method to prepare a ligand conjugate, comprising the step of carrying out a reductive amination reaction by using the linker compound of ~~any one of claims 1 through 4~~ claim 1 and a sugar molecule.

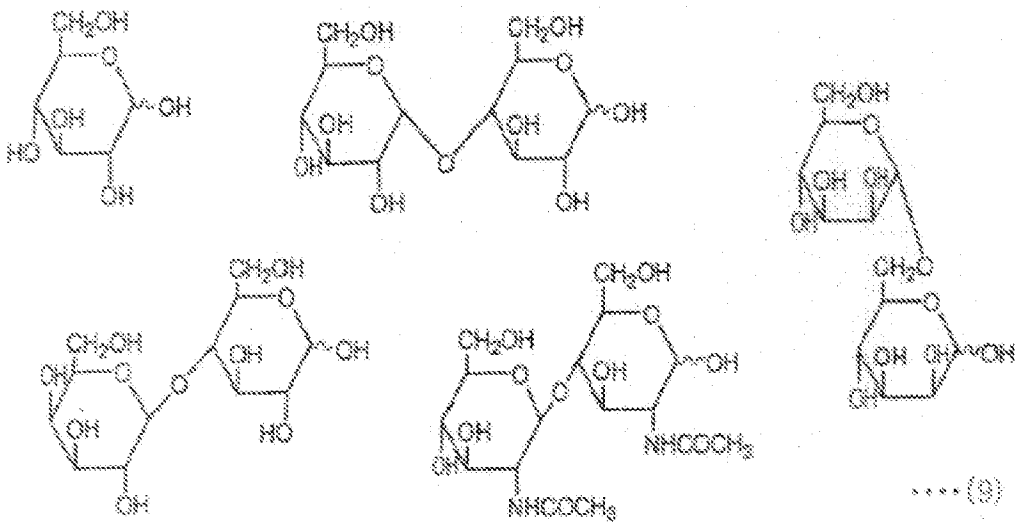
10. (currently amended): The ~~producing method according to~~ method of claim 9, wherein:

the sugar molecule is a sulfated oligosaccharide having a heparin partial structure of disaccharide unit represented by the following general formula (8).



.....(8)

11. (currently amended): The ~~producing method according to~~ method of claim 9, wherein: the sugar molecule is at least one oligosaccharide selected from the group ~~(9).~~ consisting of:



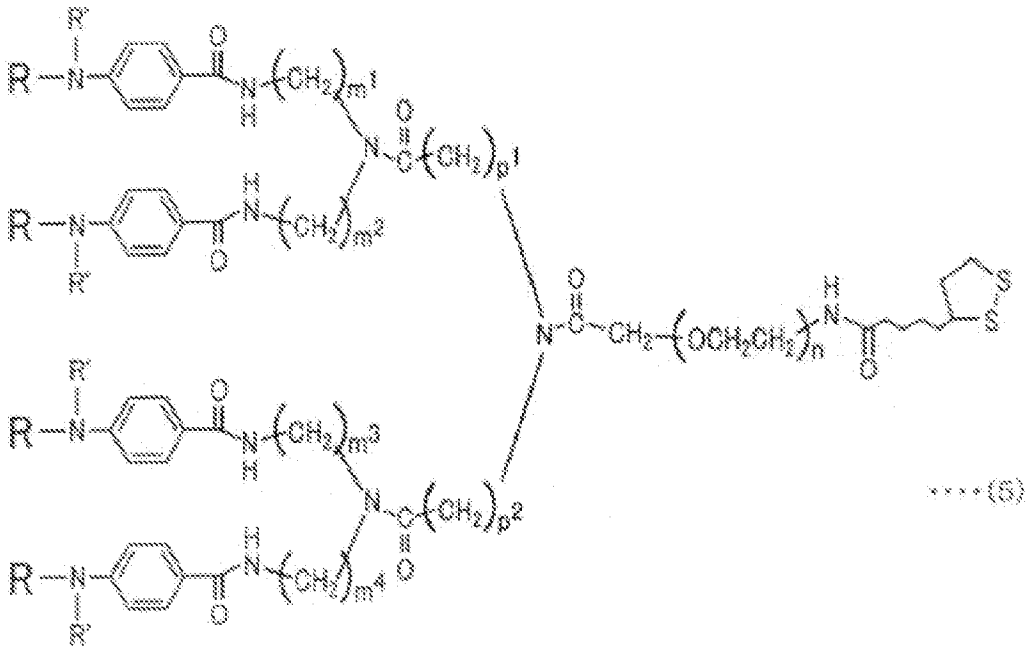
12. (currently amended): A ~~sugar-molecule-introducing~~ method of arranging a sugar molecule on a surface of a supporter, comprising the step of:

causing a solution containing the ligand conjugate of ~~any one of claims 5 through 7~~ claim 5 to come into contact with a supporter ~~including~~ comprising metal on a surface thereof.

13. (currently amended): A ligand carrier which comprises the ligand conjugate of ~~any one of claims 5 through 7~~ claim 5 immobilized on a supporter ~~including~~ comprising metal on a surface thereof.

14. (currently amended): A sensor chip for a surface plasmon resonance, ~~including~~ comprising the ligand conjugate according to ~~any one of claims 5 through 7~~ claim 5 immobilized onto a surface thereof.

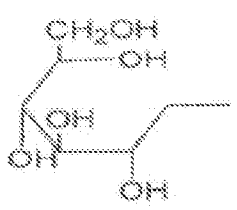
15. (new) The sensor chip of claim 14, wherein the ligand conjugate has a structure represented by formula (5),



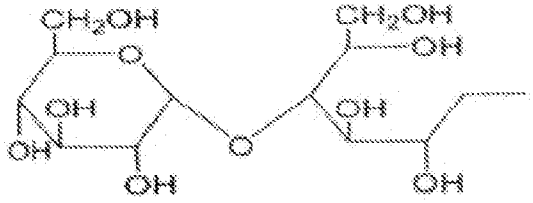
....(5)

where m^1, m^2, m^3, m^4, n, p^1, and p^2 are independently an integer of 1 to 6, R′ is hydrogen (H) or R, and

R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).

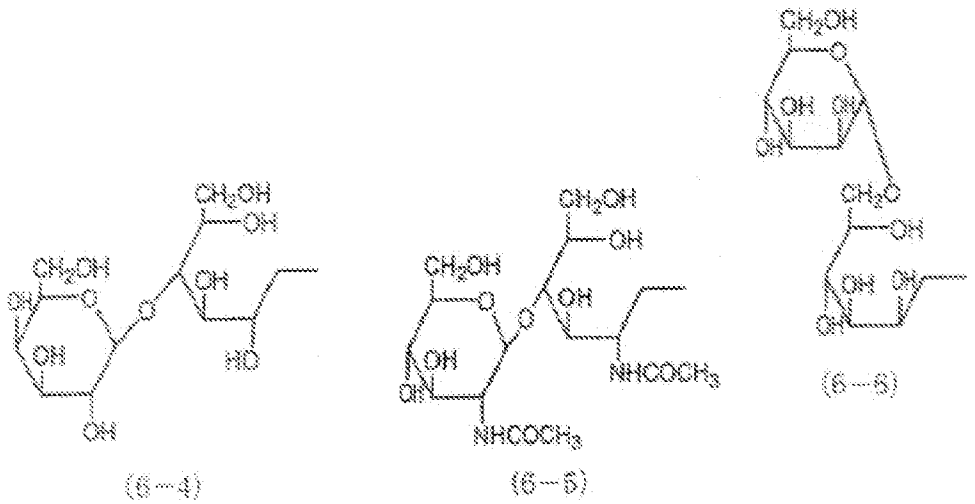


(6—1)

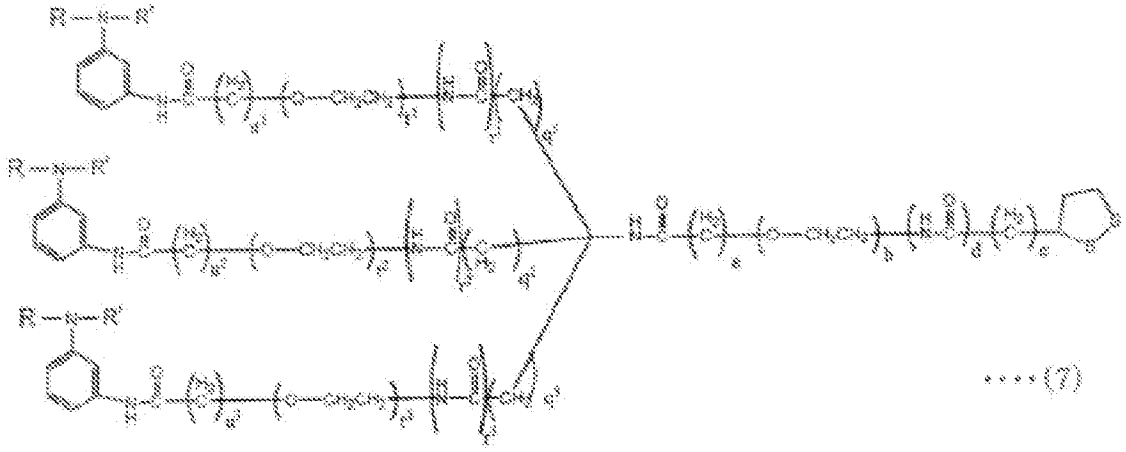


(6—2)

(6—3)



16. (new) The sensor chip of claim 14, wherein the ligand conjugate has a structure represented by formula (7),



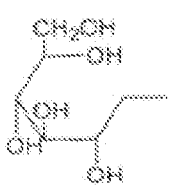
where a, b, d, e, q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6,

t^1, t^2, and t^3 are not 0 when b is 0,

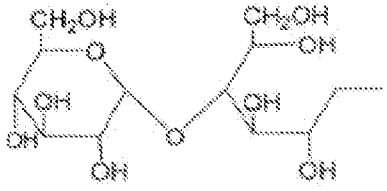
b is not 0 when t^1, t^2, and t^3 are 0,

R′ is hydrogen (H) or R, and

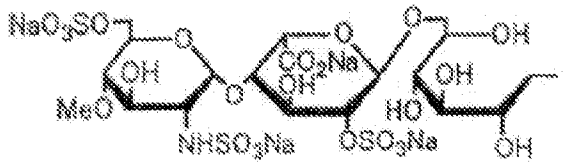
R is an oligosaccharide-derived compound selected from among the following formulae (6-1) through (6-6).



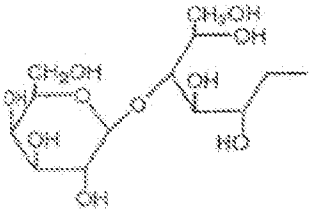
(6-1)



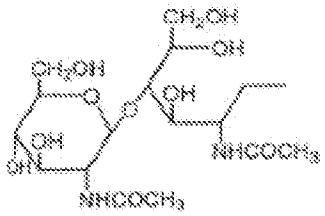
(6-2)



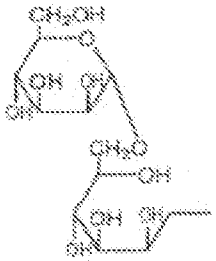
(6-3)



(6-4)



(6-5)



(6-6)

17. (new) The compound of claim 3, wherein:

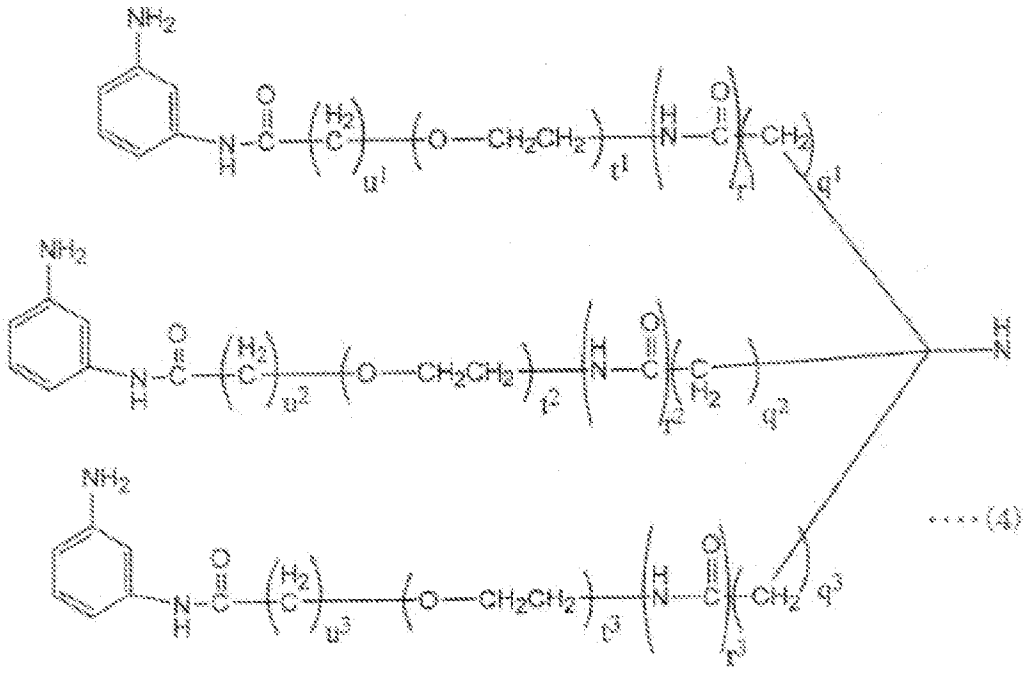
a is 1;

b is 1-6;

d is 1; and

e is 4.

18. (new) The linker compound according to claim 2, where X has a structure represented by following general formula (4),



wherein q^1, q^2, q^3, r^1, r^2, r^3, t^1, t^2, t^3, u^1, u^2, and u^3 are independently an integer of 0 to 6.